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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/705,316	11/03/2000	David R. Battiste	33938US	7718

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EXAMINER

DANG, THUAN D

ART UNIT	PAPER NUMBER
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1764

DATE MAILED: 09/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/705,316	BATTISTE, DAVID R.	
	Examiner	Art Unit	
	Thuan D. Dang	1764	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 8-21, 30-33 and 35-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 8-21, 30-33, 35-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 13-21, 38 and 39 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Nowhere in the specification supports the limitation “without simultaneously performing a reference measurement of a reference material with the Raman spectrometry equipment” as called for in claims 13. Claims 38 and 39 has no support from the specification.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 13-21, 38 and 39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The word “without simultaneously” is indefinite since it is unclear if the action, namely “performing a reference measurement” as called for in claim 13, “exposing a reference material”

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as called for in claim 38, and “acquiring a reference output signal” is either (1) excluded from the claimed process or (2) included in the claimed process, but carried out at different (non-simultaneous) from the required action cited in the claims (see claims).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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Claims 1-5, 8-11, 13-21, and 30-33, 35-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lashier et al (5,689,028) in view of Alsmeyer et al (5,638,172).

Lashier discloses a process of trimerization of ethylene to produce hexene in the presence of a catalyst and optionally added hydrogen (the abstract; col. 1, lines 55-62; col. 5, lines 25-27).

Lashier et al discloses that the conversion, selectivity and the produced polymer polymerization process must be monitored (col. 9, lines 24-28).

Lashier does not disclose using Raman spectrometry equipment to monitor these parameters of the process (see entire patent for details). However, Alsmeyer discloses that chemical processes such as polymerization can be monitored in-situ by Raman spectrometry (the abstract; col. 1, lines 44-60).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Lashier process by using the Raman spectrometry to measuring reactants and/or product of the Lasher trimerization of ethylene to decide the conversion, selectivity, and the amount of polymer of the process since Alsmeyer discloses that the Raman spectrometry has a lots of advantages for monitoring chemical processes (col. 1, lines 22-27; col. 2, lines 47-51; col. 3, lines 15-30 and 59-67).

All of the conversion, selectivity and the amount of polymer must be decided by measured amounts of components in the reaction. Once, measured parameters are not desired ones, one having ordinary skill in the art would adjust the process such as by changing the input and the output of the reactants, the catalyst and/or polymer product to/from the reactor.

The limitation of claim 5 can be found on column 7, lines 27-31.

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Alsmeyer does not disclose the resolution of the Raman equipment. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Lashier process having been modified by the Alsmeyer teaching by using appropriate wave lengths provided that wave lengths can be used to monitor the process.

The limitation of claims 18 and 19 can be found on column 14, lines 17-20.

Clearly, the cited references are totally silent as to the features which applicants want to exclude from the claims process (see the entire patent for details).

Claims 12 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lashier et al (5,689,028) in view of Alsmeyer et al (5,638,172) further in view of Tanaka et al (5,750,817).

Lashier discloses a process as discussed above.

Lashier does not disclose the process is performed in more than one reactor.

However, Tanaka operates an oligomerization of olefins such as ethylene in a series of reactors (col. 11, line 21 thru col. 12, line 47).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Pinole process by operating the process in a series of reactors as disclosed by Tanaka since it has been established that the transposition of process steps or the splitting of one step into two, where the processes are substantially identical or equivalent in terms of function, manner and result was held to be not patentably distinguish the processes. *Ex Parte Rubin* 128 159 (PO BdPatApp 195).

It would have been obvious to one having ordinary skill in the art at the time the

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invention was made to have modified the Pinole process having been modified by Tanaka's teachings by monitoring the concentration of the effluent of each reactor and adjusting the process by appropriate parameter such as providing monomer to the effluent of the preceding reactors.

Response to Arguments

Applicant's arguments filed 7/14/2005 have been fully considered but they are not persuasive.

In the remark, applicants cites pages 6, lines 24-25, page 8, line 15, page 9, line 25 thru page 10, line 11, page 10, line 32 thru page 11, line 2 and page 18, lines 24-34 to support new limitations added to claim 13, and new claims 38 and 39. Actually, only on lines 1 and 2 of page 11, the specification discloses that the present processes apparatus do not employ simultaneously irradiation of a reference material. This teaching does not support anything for measurement as called for in claim 13, and claims 38 and 39.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

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The argument that applicants believe that Alsmeyer is directed to the use of high-resolution equipment and does not even contemplate the use of low-resolution Raman equipment is not persuasive since based on which facts! applicants can jump to this conclusion. In contrast, as discussed by the examiner in the above rejection, one having ordinary skill in the art who studies the teachings the cited prior art would recognize that using any method, namely Raman spectrometry, by any equipment to monitoring the process of oligomerization would not change the product of oligomerization.

The argument that Alsmeyer requires a simultaneous measurement of a reference which is not required by the applicants' claimed process is not persuasive since as discussed in the above 112, rejection, these newly added limitations have no support from the specification. Assuming arguendo, the specification fully supported these limitations, the specification also do not describe the term "without simultaneously" as discussed in the above 112, 2nd rejection. Further, the one what applicants want to exclude is not the one included in the Alsmeyer.

The argument that the examiner has not provide objective evidence of a reason to modify the Lashier to measure such parameters with Raman Spectrometry equipment is not persuasive since as discussed in the above rejection, Lashier et al discloses that the conversion, selectivity and the produced polymer polymerization process must be monitored (col. 9, lines 24-28).

Lashier does not disclose using Raman spectrometry equipment to monitor these parameters of the process (see entire patent for details). However, Alsmeyer discloses that chemical processes such as polymerization can be monitored in-situ by Raman spectrometry (the abstract; col. 1, lines 44-60).

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Lashier process by using the Raman spectrometry to measuring reactants and/or product of the Lasher trimerization of ethylene to decide the conversion, selectivity, and the amount of polymer of the process since Alsmeyer discloses that the Raman spectrometry has a lots of advantages for monitoring chemical processes (col. 1, lines 22-27; col. 2, lines 47-51; col. 3, lines 15-30 and 59-67).

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuan D. Dang whose telephone number is 571-272-1445. The examiner can normally be reached on Mon-Thu.

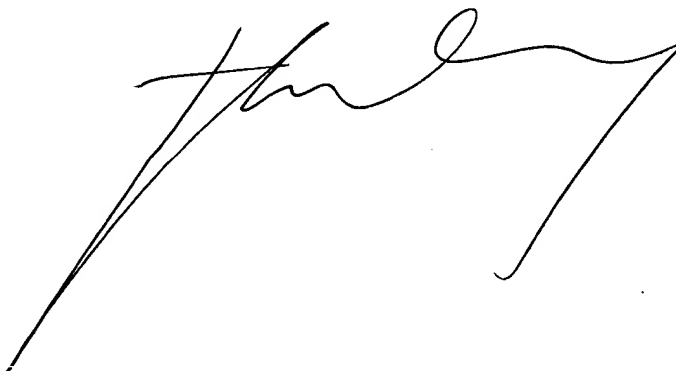
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thuan D. Dang
Primary Examiner
Art Unit 1764

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A handwritten signature in black ink, appearing to be 'Thuan D. Dang', written in a cursive style. The signature starts with a large 'T' and ends with a long horizontal stroke.